

Chapter 8: Working with Archived Entries

In this chapter we discuss searching, viewing, annotating and printing archived entries from within the **CRL** application and from the Web.

8.1 Accessing Archived Entries from within CRL

The **SEARCH** button on the **CRL** toolbar provides access to the database of archived entries. It brings up a window with two tabs: **INQUIRIES** and **LOGENTRY EXPLORER**. These offer two types of access methods (described in sections 8.2 and 8.3, respectively). Use either method to locate the archived entries of interest¹. To view the search results, pull up a report container² (see section 8.7.1 *Pull Up a Report Container*) and drag the found entries into it. From there you can edit the contents of the container, and print reports, as described in section 8.7 *Creating, Editing and Printing Reports in CRL*.

8.2 Inquiries

The **INQUIRIES** feature allows you to search the database by constructing an inquiry (query) using a set of filters. After you configure your inquiry, you can execute it, save the results to a report container, save the inquiry for future use, restore it, and edit it.


1. If any entries get archived when the database is down, and if the database was not updated to reflect these new entries once it was restarted, then these entries will be retrievable only from the **LOGENTRY EXPLORER**, since it uses the filesystem. You will not be able to find them from **INQUIRIES**.

2. You *can* save the results to an input container, but the category/topic of the archived entry(ies) has to match that of the container. It's generally best to just use report containers which accept archived entries of any category/topic.

The search runs in the background, enabling you to continue your work in **CRL** while it's running. A progress bar displays the progress of the search. The cursor changes to show that a search is running, but note that if you click on another **CRL** internal window, the cursor changes back to the pointer. You can cancel a search at any time via the **CANCEL INQUIRY** button.

8.2.1 Create an Inquiry

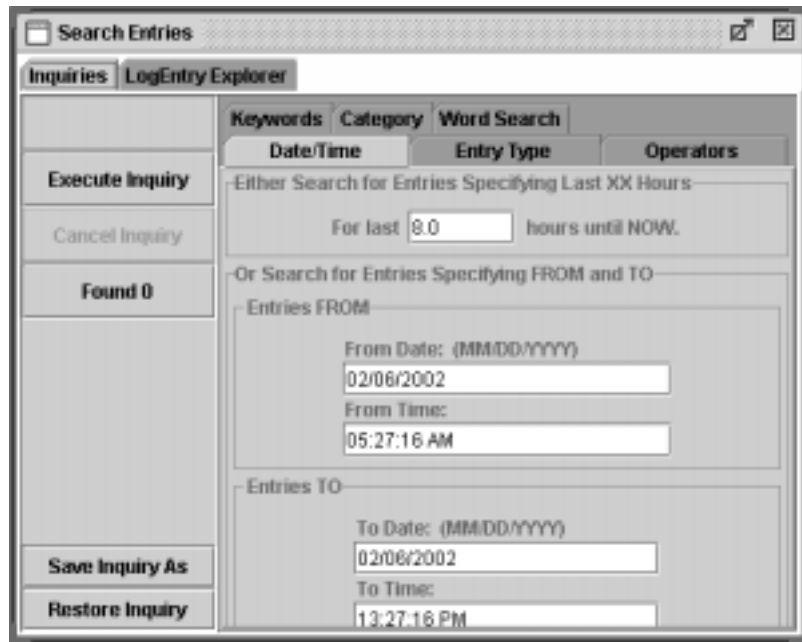
You can construct inquiries to be simple or complex, depending on the number of filters you include. You can construct them to be general or specific, depending on the level of detail you specify for each filter. You can edit your search criteria, and add filters not previously used. Select each filter tab in turn on the right side of the **SEARCH ENTRIES** window, and enter your search criteria.



The *entry type*, *operator*, and *keyword* filters allow you to select or input multiple criteria, separated by a logical AND or OR. **CRL** requires that the criteria be separated by a logical operator. By necessity, the interface does not prohibit you from deleting an operator; but if you don't replace it with another, the system will return an error of the form "You have error in your SQL syntax near '<filter type> = <criterion>', e.g., ... near 'Entry Type = Ipen'".

Date/Time

The **DATE/TIME** filter allows you to specify a time window in one of two ways. You can specify a number of hours to look back from the present time (e.g., the last 8.0 hours, which is the default), or specify a start and end time. The time of entry creation is used in the search, rather than archive time. If you change the number of hours, the FROM/TO information will change accordingly. If you set either or both of the FROM/TO values, the number of hours in the top field will show 0.0, and become inactive.



An editing note: the fields are type-over. When you've completed this filter, optionally choose another to further restrict your search.

Entry Type

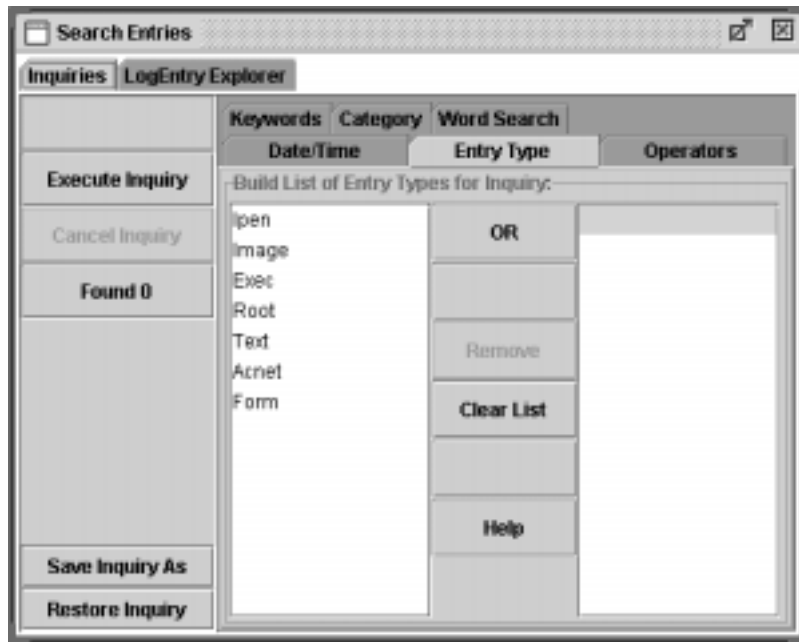
The **ENTRY TYPE** filter allows you to restrict the selection of entries by type. In the left-hand column is the list of possible entry types. You may choose as many as you like. By default an OR is automatically added between entry types so that entries of all selected types are eligible for retrieval.

To select an entry type: click on a type in the left-hand list; it will appear on the right-hand side

To remove an entry type: select from the right-hand list and click **REMOVE**

In the same manner, you can also remove any OR in order to create an AND between two adjacent selections. Having no operator between selections results in an error.

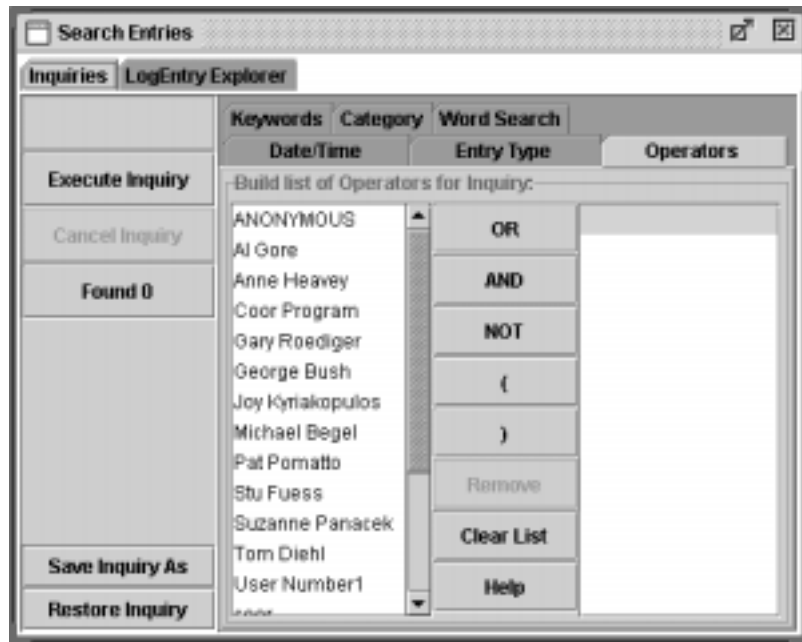
You cannot add/remove multiple entry types at a time.



When you've completed this filter, optionally choose another to further restrict your search.

Operators

The **OPERATOR** filter allows you to restrict the selection of entries by operator. To add an operator to the search list, click the operator's name in the left-hand list. By default, an OR is automatically added between selected operators so that all entries containing any of these operators are eligible for retrieval. To change an OR to AND or NOT, simply remove the OR then click the desired logical token. Use the parentheses for grouping, as needed. Operators and logical tokens are inserted before the selected item in the right-hand search list.

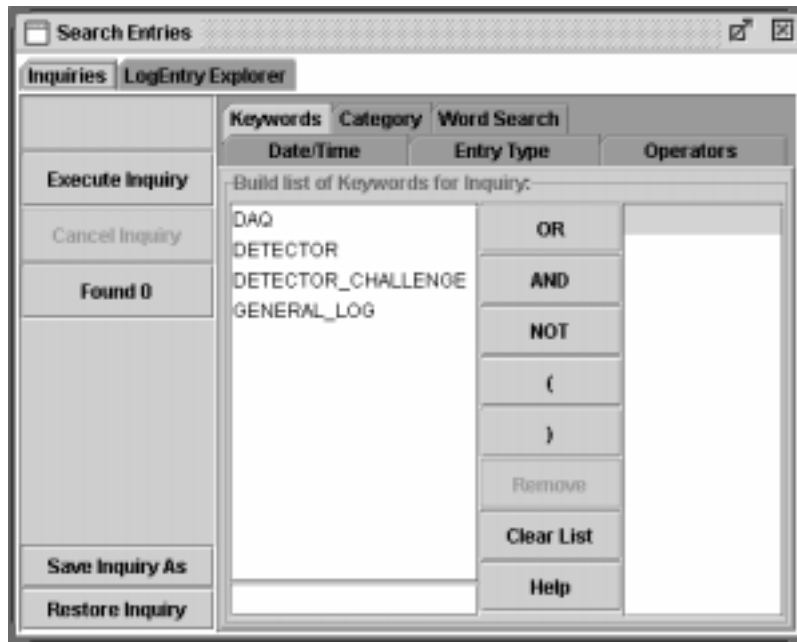


When you've completed this filter, optionally choose another to further restrict your search.

Keywords

The **KEYWORD** filter allows you to restrict the selection of entries by keyword. To add a keyword to the search list, click it in the left-hand list. By default, an **OR** is automatically added between selected keywords so that all entries containing any of these keywords are eligible for retrieval. To change an **OR** to **AND** or **NOT**, simply remove the **OR** then click the desired logical token. Use the parentheses for grouping, as needed. To insert a keyword or logical token in front of an item already in the right-hand search list, select that item before inserting the keyword or token.

You can also add a keyword that's not listed on the left. To do so, type the keyword at the bottom of the left-hand keyword list using **UPPERCASE** letters only, then press **ENTER** to move it to right-hand side.



When you've completed this filter, optionally choose another to further restrict your search.

Category

(not implemented as of V1_7_04)

Word/String Search

The word search filter allows you to retrieve entries based on words or strings occurring in them. Currently, searches can be run as follows:

- String Search select entries containing the entire search string entered
- Word Search (Any) select entries containing ANY of the words entered
(separate words with a space)
- Word Search (All) select entries containing ALL of the words entered
(separate words with a space)

Only one Option is provided (as of V1_7_04):

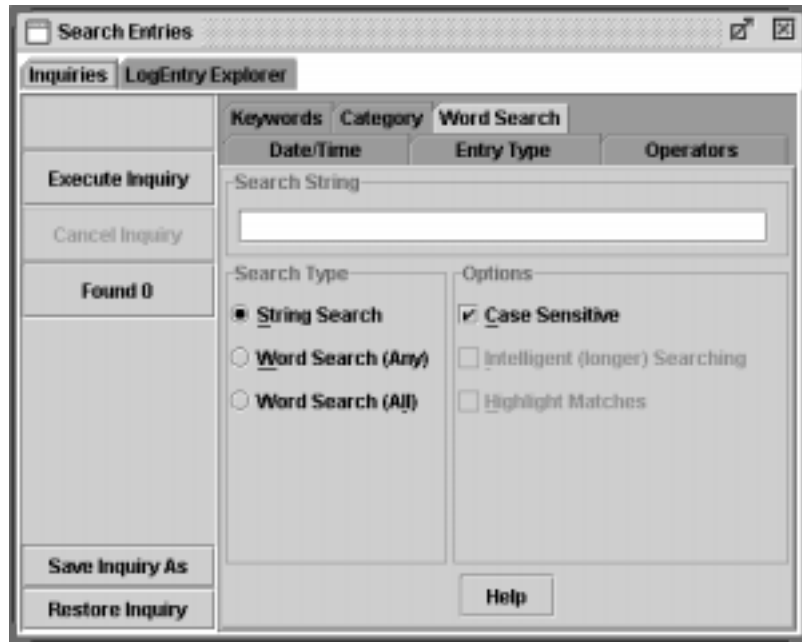
- Case matching; if **CASE SENSITIVE** is left unchecked, case is ignored.

Planned for future releases:

- Option for the default (faster) search, or the intelligent (slower) search.
The default search checks the XML rather than the entry itself (if the search string is anywhere in the XML code, the entry is matched). If you

check the **INTELLIGENT (LONGER) SEARCHING** button, **CRL** instantiates each logentry object and provides accurate searching at the expense of search time.

- Option to highlight matched text when retrieved entries are displayed.



When you've completed this filter, optionally choose another to further restrict your search.

8.2.2 Execute an Inquiry and View Results

When your inquiry is configured and ready, click the **EXECUTE INQUIRY** button to run the search. As mentioned above, it runs in the background so that you can continue to use **CRL** while it runs. A progress bar is displayed for longer inquiries. When execution has completed, the **FOUND <N>** button will indicate the number of entries found that match the inquiry parameters, e.g., **FOUND 7**. Drag the **FOUND <N>** button to a report container to view the results.

Note that you *can* drag the **FOUND <N>** button into an input container, but only the entries of the same category/topic as the container will be included; all other entries will be filtered out. A warning message appears when you do this.



Cells within a table are scrollable when an archived entry is restored via a search in **CRL**.

8.2.3 Halt Execution of an Inquiry

If you wish to cancel the inquiry after you click the **EXECUTE INQUIRY** button but before the search completes, click the **CANCEL INQUIRY** button.

8.2.4 Save an Inquiry

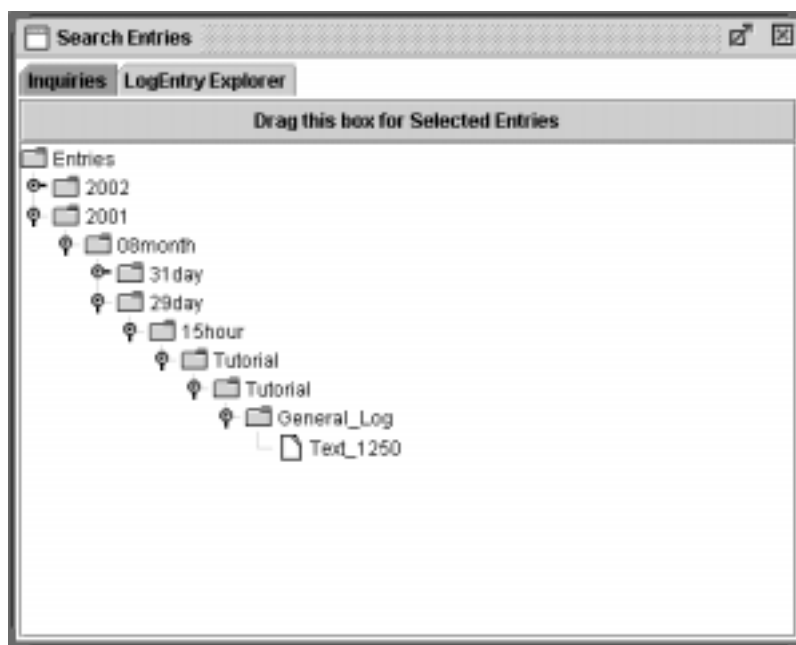
If you wish to use the same inquiry again at a later time (as is or edited), save your inquiry to a file. To do so, click the **SAVE INQUIRY AS** button. This brings up a standard window for choosing a directory and filename.

8.2.5 Restore an Inquiry

To restore a previously saved inquiry, click the **RESTORE INQUIRY** button, and type in or browse for the inquiry file. Run it as is, or edit it first. All the filter panels are made available so that you can add more criteria to your search if you like. You can save a restored inquiry (changed or unchanged) to the same or a different file.

8.3 LogEntry Explorer

The **LOGENTRY EXPLORER** feature allows you to access archived entries using the file system, down the tree by year, month, day and hour (reflecting time of entry creation, not archive time). Within a selected hour time window, you can confine your search to a particular data category and/or topic. Individual entries make up the final branches of the hierarchical tree; they are labelled and numbered.



You can select a folder (e.g., a month, an hour, a category) or an individual entry to drag into a report container in order to view its contents. You can select multiple items (including folders, entries or both) and drag them collectively¹ to the container. Note that you can drag the entries into an input container, but only the entries of the same category as the container will be included; all other entries will be filtered out.



Cells within a table are scrollable when an archived entry is restored via a search in **CRL**.

8.4 Accessing Archived Entries on the Web

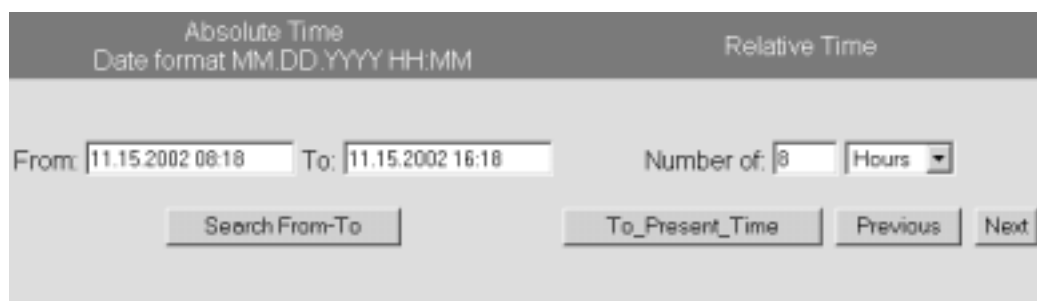
Each experiment can configure its own database inquiry web site from which experimenters anywhere in the world can search, view, annotate and print archived entries. Your experiment will need to provide you with the URL and any related documentation.

1. Note that the down motion of the mouse click selects/deselects. So after all items are selected, move the mouse outside the tree (or into the **DRAG THIS BOX FOR SELECTED ENTRIES**), press the Shift or Ctrl button as appropriate, and then begin dragging.

8.4.1 Define your own Search Criteria

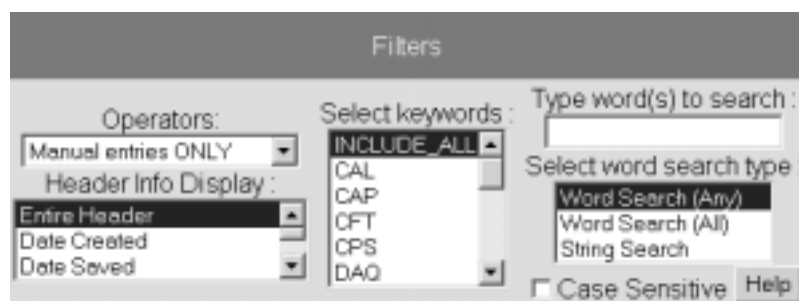
The images shown here are for a sample web inquiry page. They illustrate the search features available. To make the pages readable here, we've split the page header onto two lines:

The left-hand portions, labelled *Absolute Time* and *Relative Time* allow you to specify a time frame in one of these two ways:



The screenshot shows a search interface with two main sections: **Absolute Time** and **Relative Time**. The **Absolute Time** section has a label "Date format MM.DD.YYYY HH:MM" and two input fields: "From: 11.15.2002 08:18" and "To: 11.15.2002 16:18". Below these is a button labeled "Search From-To". The **Relative Time** section has a label "Number of: 8" and a dropdown menu set to "Hours". Below this is a button labeled "To_Present_Time". At the bottom right of the interface are two buttons: "Previous" and "Next".

The right-hand portion, labelled *Filters*, allows you to specify one or more of several search criteria, and to select the header information you want to display:



The screenshot shows the **Filters** section of the search interface. It contains three main areas: **Operators:** with a dropdown menu set to "Manual entries ONLY"; **Header Info Display:** with a list box containing "Entire Header", "Date Created", and "Date Saved", where "Entire Header" is selected; and **Select keywords:** with a list box containing "INCLUDE_ALL", "CAL", "CAP", "CFT", "CPS", and "DAQ", where "INCLUDE_ALL" is selected. To the right of these is a text input field labeled "Type word(s) to search:" and a dropdown menu labeled "Select word search type:" with options "Word Search (Any)", "Word Search (All)", and "String Search". At the bottom right are checkboxes for "Case Sensitive" and a "Help" button.

Note that in *Type word(s) to search*, the operator "NOT" doesn't work. However, if under *Select keywords* you find a keyword labelled "NOT_<KEYWORD>", e.g., NOT_CAL, it can be used to eliminate entries with that keyword from the search (e.g., to eliminate entries with the keyword CAL attached)

The inquiry web page as a whole looks like this next image, showing an entry (the right-hand side of the header is cut off):

Absolute Time
Date format MM/DD/YYYY HH:MM

Relative Time

From: 11/15/2002 08:18 To: 11/15/2002 18:18

Number of: 8 Hours

Search From-To To_Present_Time Previous Next

Menu
Home
Enter
Date Cr
Date Se

[Annotate This Entry](#)
Date Created: Friday, November 15, 2002 8:23:13 AM CST
Date Saved: Friday, November 15, 2002 10:28:08 AM CST
Category - Topic - sequence number: CAL/Log - CAL_Log - 150111
Operator(s): Wanda Prado
Keyword(s): CAL

Run 168133 stopped with 469703 events
no hot cells observed

8.4.2 Run a One-Click Search

Your experiment may also have predefined inquiries set up which you can run just by clicking a link on a web page. For instance, here is a portion of a web page the D0 experiment has set up. It contains several predefined inquiries for a number of subjects:

```

• All Logbook Entries 12 hours 24 hours 36 hours 48 hours 60 hours 72 hours 96 hours 1 Week 2 Weeks
• CAP + DAQ + MUO Log Entries 12 hours 24 hours 36 hours 48 hours 72 hours 96 hours 1 Week 2 Weeks 30 Days 60 days
• DAQ Shifter Log Entries 12 hours 24 hours 36 hours 48 hours 60 hours 72 hours 96 hours 1 Week 2 Weeks 30 Days All
• Captain Log Entries 12 hours 24 hours 36 hours 48 hours 60 hours 72 hours 96 hours 1 Week 2 Weeks
• Global Monitor Log Entries 12 hours 24 hours 36 hours 48 hours 72 hours 1 Week 2 Weeks 30 days
• Calorimeter Log Entries 24 hours 48 hours 72 hours 1 week 2 weeks 30 days 60 days
• SMT Log Entries 24 hours 72 hours 1 week 2 weeks 30 days 60 days
• CFT Log Entries 24 hours 72 hours 1 week 2 weeks 30 days 60 days
• Muon Log Entries 24 hours 72 hours 1 week 2 weeks 30 days 60 days

```

Selecting the "4 hours" link for **ALL LOGBOOK ENTRIES**, the following results page comes up (the entry content has been purposely obscured). It's set up so that users can run predefined inquiries (for the same subject) from this page, too.

Predefined
Inquiries:

- [Last Hour](#)
- [Last 4 Hours](#)
- [Last 8 Hours](#)
- [Last 12 Hours](#)
- [Last 24 Hours](#)
- [Last 36 Hours](#)
- [Last 48 Hours](#)
- [Last 72 Hours](#)

Results

[Annotate This Entry](#) Date Created: Tuesday, November 19, 2002 12:35:32 PM CST
Date Saved: Tuesday, November 19, 2002 12:43:33 PM CST
Category - Topic - sequence number: L2Log - L2_Log - 151149
Operator(s): Miroslav Kopal
Keyword(s): L2

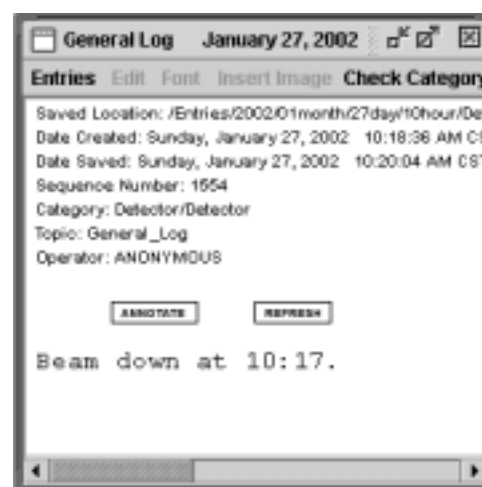
[Annotate This Entry](#) Date Created: Tuesday, November 19, 2002 12:32:11 PM CST
Date Saved: Tuesday, November 19, 2002 12:43:37 PM CST

8.5 Annotating Archived Entries

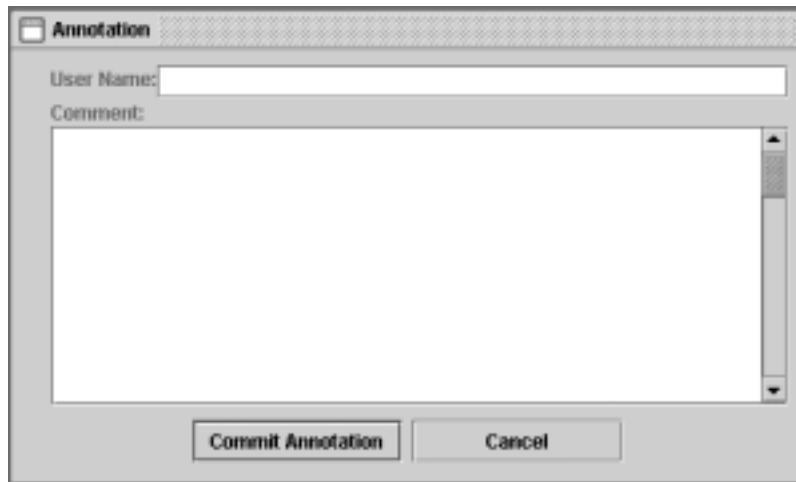
8.5.1 Annotate Within CRL Application

Annotate an Entry

Once a logbook entry has been archived, the entry gets “set in stone”. The only change you can make is to add an annotation. When an entry is archived, the **ANNOTATE** and **REFRESH** buttons appear.

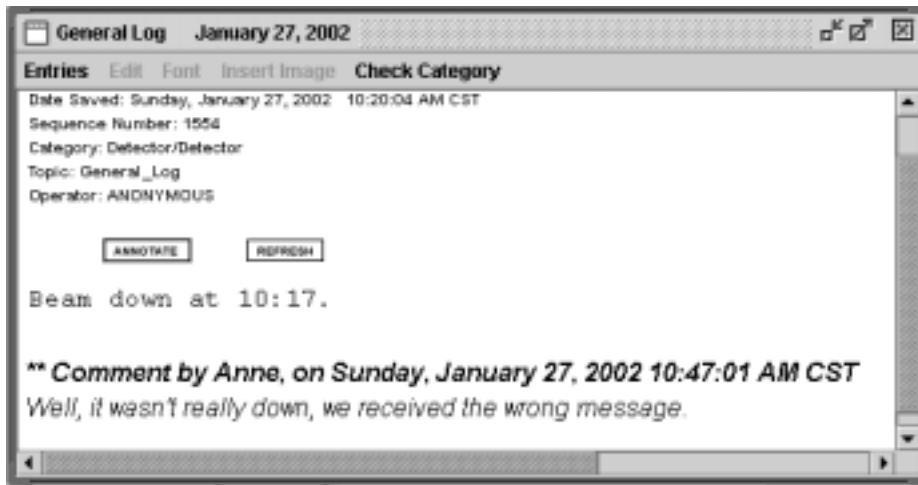


To annotate the entry, click the **ANNOTATE** button. A window pops up in which you enter your name and type in your comments. When you're ready, click on the **COMMIT ANNOTATION** or **CANCEL** button, as desired. No checks are made by **CRL** on the contents of the fields before committing the annotation.



The image shows a dialog box titled "Annotation". It contains a "User Name:" label followed by a text input field. Below that is a "Comment:" label followed by a large text area with a vertical scrollbar. At the bottom of the dialog are two buttons: "Commit Annotation" and "Cancel".

Annotations that you make this way are automatically displayed in the entry. Annotations made at other terminals in the control room or via the web interface do not appear until you press the **REFRESH** button; see below. An annotated entry displays the added comments in this format:



The image shows a window titled "General Log" with a date of "January 27, 2002". It has a menu bar with "Entries", "Edit", "Font", "Insert Image", and "Check Category". The main area displays the following information: "Date Saved: Sunday, January 27, 2002 10:20:04 AM CST", "Sequence Number: 1554", "Category: Detector/Detector", "Topic: General_Log", and "Operator: ANONYMOUS". Below this are two buttons: "ANNOTATE" and "REFRESH". The main text of the log entry is "Beam down at 10:17." followed by a comment: "**** Comment by Anne, on Sunday, January 27, 2002 10:47:01 AM CST**
Well, it wasn't really down, we received the wrong message."

Refresh Entry to see Annotations

To see annotations made on an entry at other terminals running **CRL** in the control room or via the web interface, click the **REFRESH** button. This refreshes only the entry in question, it does not refresh all the entries in the container.

8.5.2 Annotate from the Web Interface

Annotate an Entry

Each entry as it appears on your experiment's web interface should have a link for "Annotate this entry" (see the image at the end of section 8.4.1 *Define your own Search Criteria*). The appearance and location of this link may vary from one implementation to another. Click "Annotate this entry" to add a comment, then commit (or cancel) the comment. Annotations lacking either a username or content do not get saved.

Refresh Entry to see Annotations

When your annotation is complete, click your browser's "Refresh" or "Reload" button. This will update all the entries displayed on the web page (in contrast to the single-entry refresh within the **CRL** application).

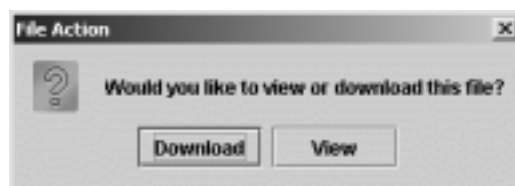
8.6 Downloading/Viewing Attached Files

For an output file from an external application that was attached to an entry (see section 3.3.4 *Output Files from External Applications*), the file content does not appear in the container window. After archiving the entry, you can download or view the file. Along with the **ANNOTATE** and **REFRESH** buttons, a **DOWNLOAD** button appears with the entry:

```
Saved Location: /Entries/2002/06/month/28day/11hour/Far_Detector_Installation/Installati
Date Created: Friday, June 28, 2002 11:48:56 AM CDT
Date Saved: Friday, June 28, 2002 11:52:12 AM CDT
Sequence Number: 1934
Category: Far_Detector_Installation/Installation_SHIFT
Topic: General_Installation_Log
Operator: ANDNYMOUS
Selected Keywords: :FD_INSTALLATION:GENERAL_LOG:
```

 WORDS

If you click **DOWNLOAD**, you get the following prompt:



If you click **DOWNLOAD** again, a standard dialog box appears allowing you to choose a directory and filename for the download file. If you click **VIEW**, then assuming you have the appropriate viewing software installed on your system, you can view the file.



Note that an attached file works differently from a file inserted into an entry from the **INSERT > TEXT > FROM A FILE** menu option. When inserted, the file does appear in the container window.

8.7 Creating, Editing and Printing Reports in CRL

A *report* is simply a collection of one or more archived entries in a report container.

8.7.1 Pull Up a Report Container

The first step for creating a report is to select an appropriate reporting category and topic, and open the corresponding report container. To do so:

- 1) Select the page tab at the top of the **CRL** window to display the page that contains the report category you want. This may be a report page or an entry-input page, depending on the configuration.
- 2) From the horizontal row of menu headings along the top of the selected page, choose a report menu.
- 3) From its pull-down menu (or cascading pull-down menus), choose the appropriate reporting category and topic. A report container pops up, labelled with the chosen topic.

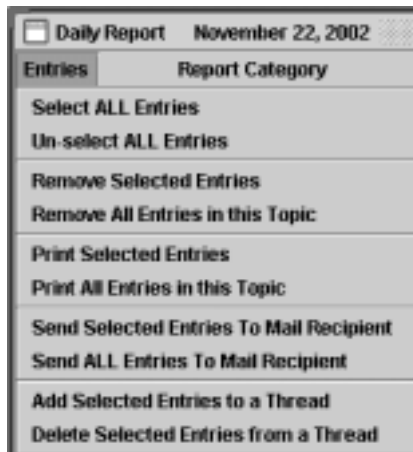
8.7.2 Report Container Menu Options

The menu options and their functions include:

ENTRIES Select/deselect all entries, remove, print entries, send entries via email, or (de)attach them to/from thread. (Bring up the **ENTRIES** menu either by clicking on the **ENTRIES** menu option, or by right-clicking anywhere in the container window.)



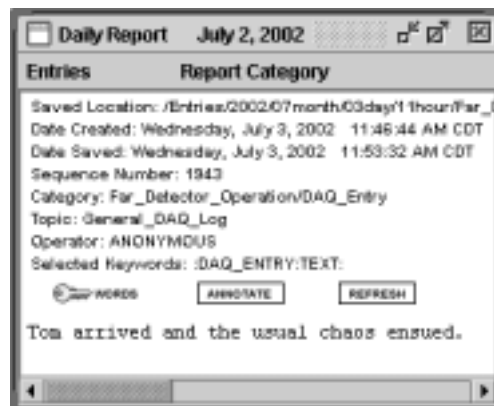
The **REMOVE** options remove the entries from the report container; they are no longer displayed in the container window, but they remain unchanged in the database.



REPORT CATEGORY Display hierarchical categorization of container (informational only).

8.7.3 Insert Entries into Report Container

Select entries/folders as described in sections 8.2 *Inquiries* and 8.3 *LogEntry Explorer*, and drag-and-drop them into the report container until you have collected all the entries you want. The entries will order themselves chronologically.



If you insert the entries into a different type of container, e.g., an input container, only the entries of the same category/topic as the target input container will show up; all others will be filtered out. So, depending upon your search criteria, you may see fewer entries than were found by the search. A warning message appears when you do this.



Cells within a table are scrollable when an archived entry is restored via a search in **CRL**.

8.7.4 Export Binary Files from Report Container

From a report container you can export (download) any binary file that has been included in an archived logbook entry. For entries that include a binary file, the **EXPORT FILE** button appears underneath the header. To export a binary file to the file system, click the **EXPORT FILE** button. A window pops up that allows you to type in or browse for a destination directory.

8.7.5 Select Report Entries in Container

You can remove or add entries to a report container in order to produce a printed report containing the exact set of entries you want. **CRL** allows you to select one or more individual entries or all entries in the container. Selected entry headers have a gray background, nonselected ones are white. See section 4.2.1 *Select/Deselect Single or Multiple Entries*.

8.7.6 Remove Entries from Report Container

There are two menu options for removing logbook entries from a report container: **REMOVE SELECTED ENTRIES** and **REMOVE ALL ENTRIES IN THIS TOPIC**. The **REMOVE** function in a report container removes the archived entry from the container *without* any confirmation query.

To remove a single entry or a set of hand-picked entries, first select each entry. Then choose **REMOVE SELECTED ENTRIES** from the **ENTRIES** menu.

To remove all entries from the report container, simply choose **REMOVE ALL ENTRIES IN THIS TOPIC** from the **ENTRIES** menu.

8.7.7 Send Entries to an Email Recipient

There are two menu options for sending logbook entries: **SEND SELECTED ENTRIES TO MAIL RECIPIENT** and **SEND ALL ENTRIES TO MAIL RECIPIENT**. These work similarly to the **SEND** options for input container menus, described in section 4.7 *Sending Entries via Email*, except that the shortcut keys are not implemented for thread containers.

8.7.8 Print Report

There are two menu options for printing a report from the report container: **PRINT SELECTED ENTRIES** and **PRINT ALL ENTRIES IN THIS TOPIC** (the latter can also be performed using **CTRL-P**.) When you use one of these options, a standard **PRINT** window for your operating system pops up in which

you set the destination printer and printer options. The printed report will contain the entries in the container corresponding to the entries you selected and the menu option you selected.

8.7.9 Add Entries to a Thread

There are two menu options for adding entries to a thread from a report container: **ADD SELECTED ENTRIES TO A THREAD** and **DELETE SELECTED ENTRIES FROM A THREAD**. These work in the same way as they do for input and thread containers. See section 7.3 *Adding Entries to a Thread* for instructions.

